

FIG. 1

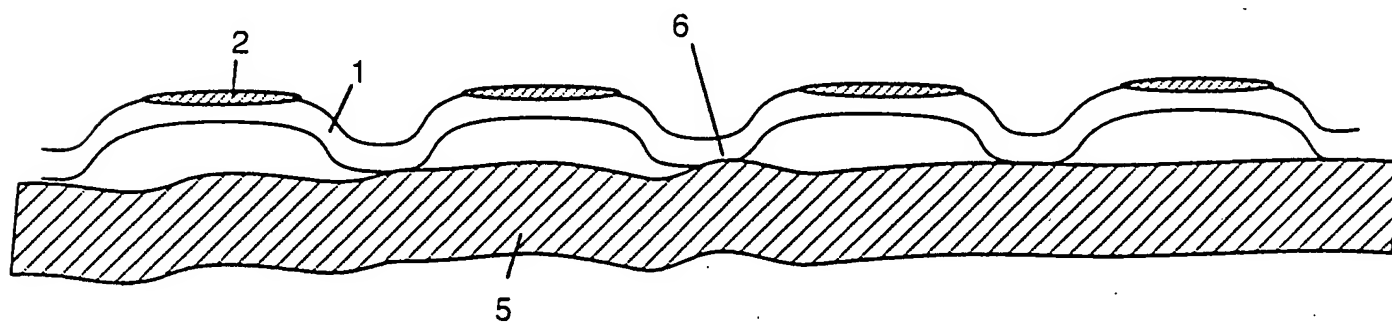


FIG. 2

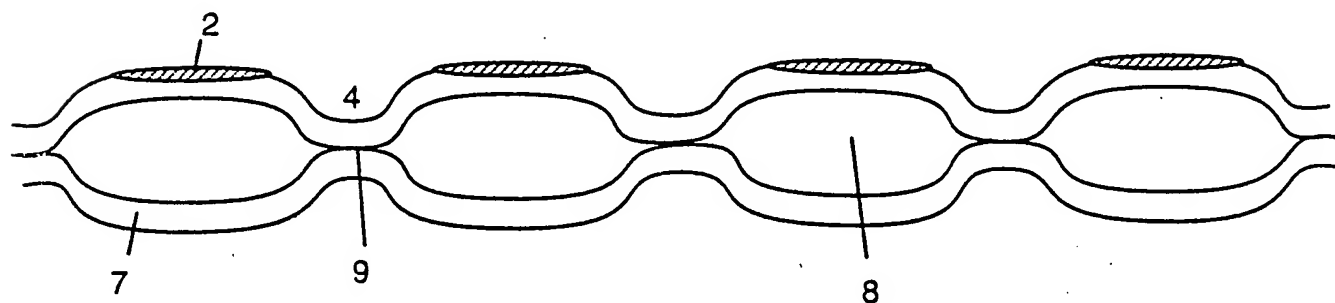


FIG. 3

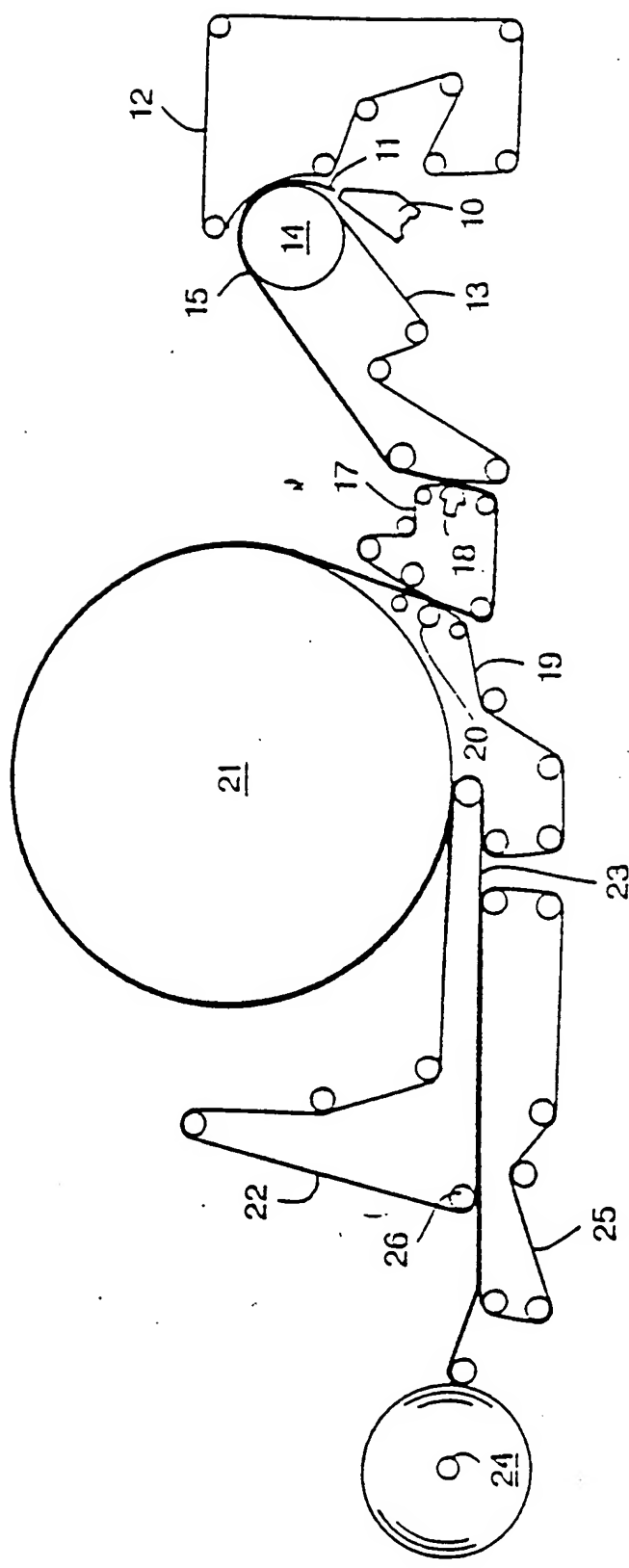


FIG. 4

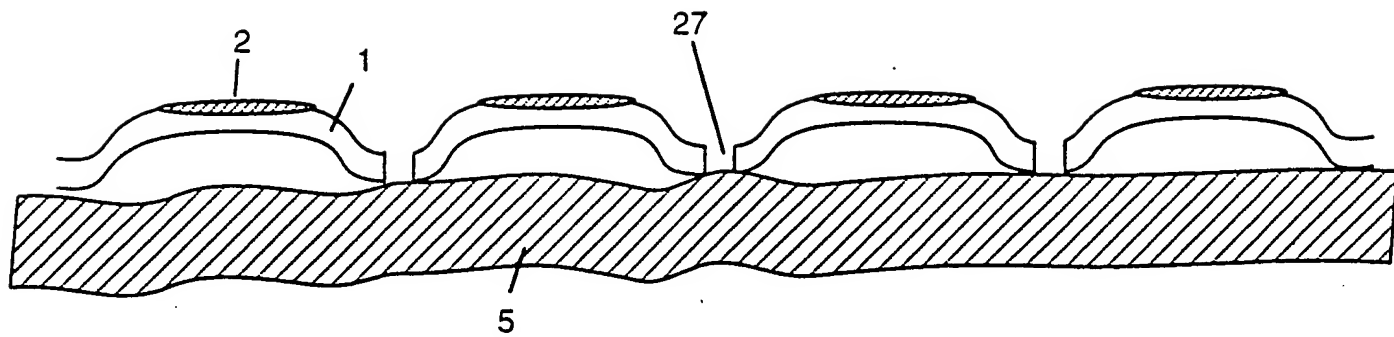


FIG. 5

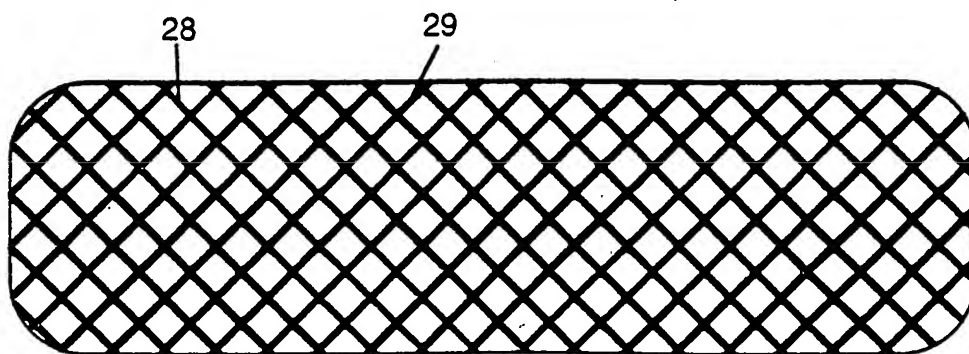
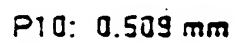
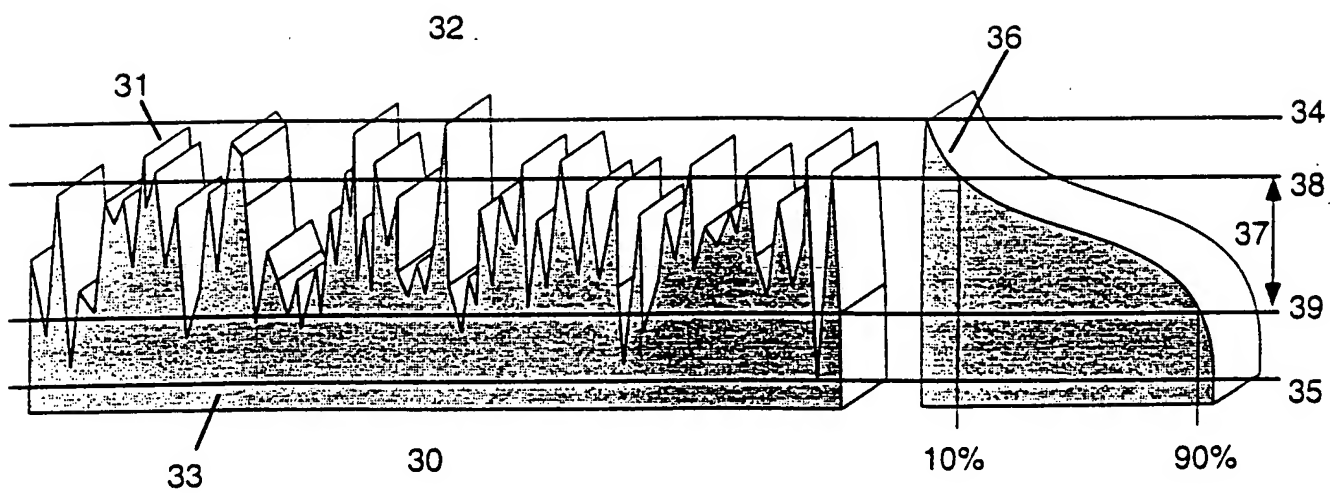


FIG. 6



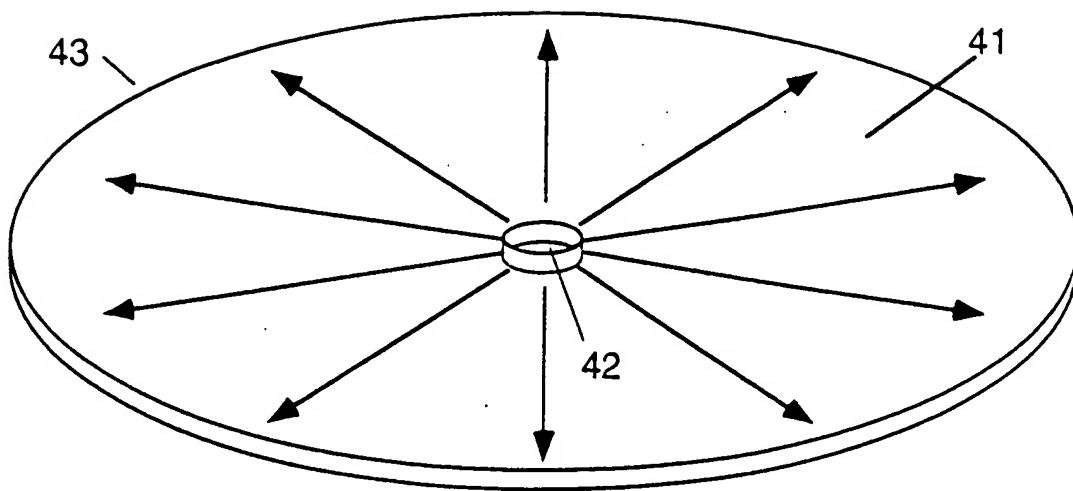


FIG. 9

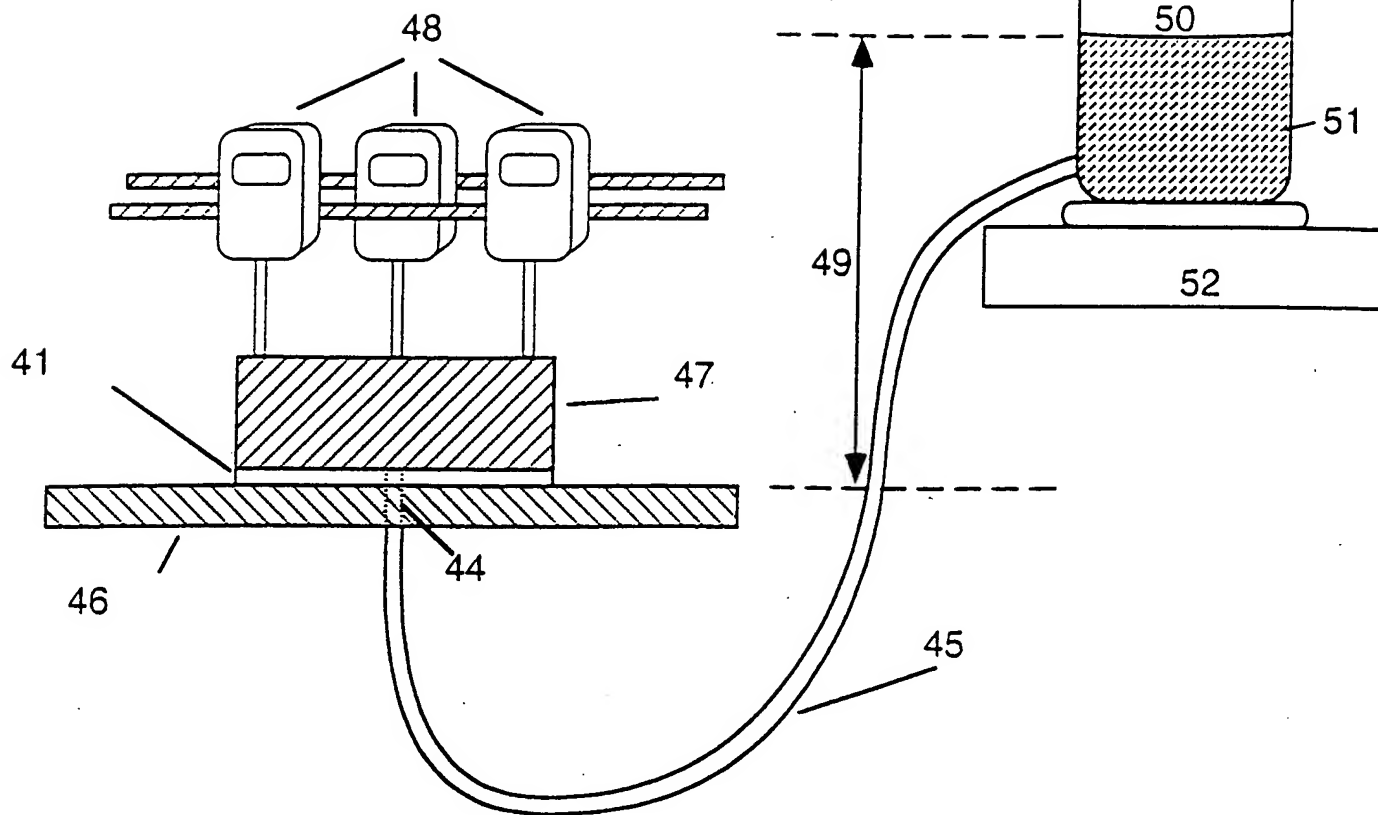


FIG. 10

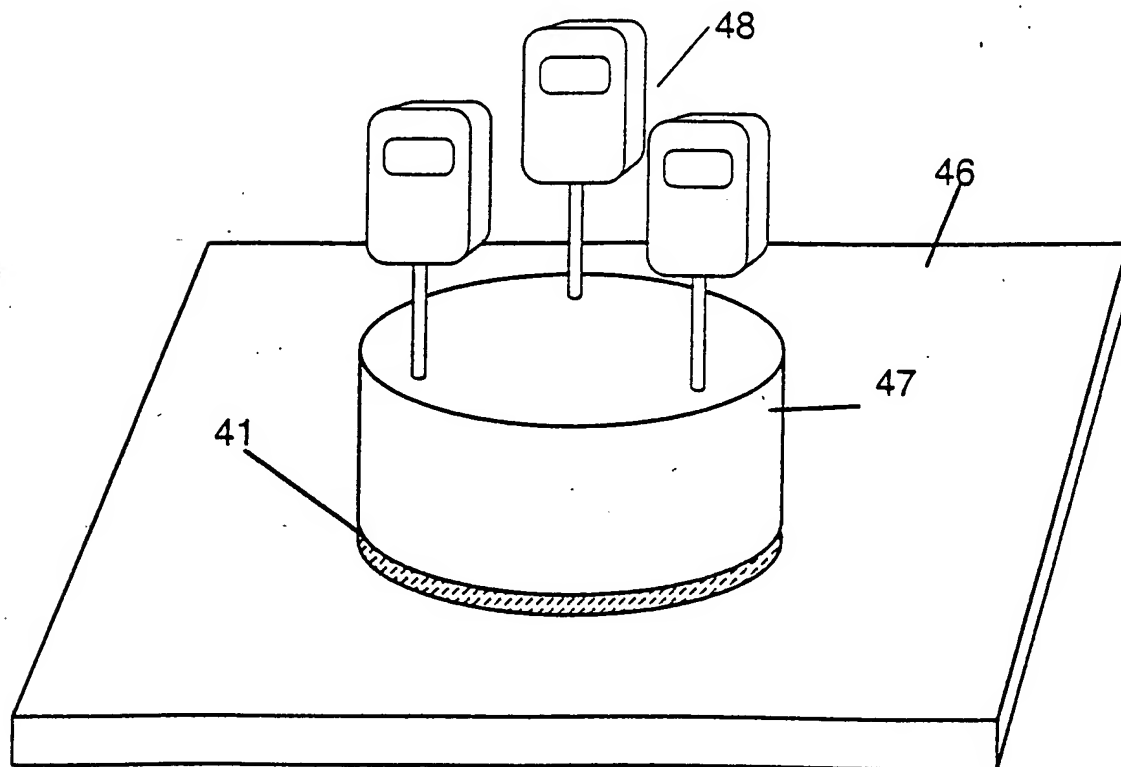


FIG. 11



FIG. 12

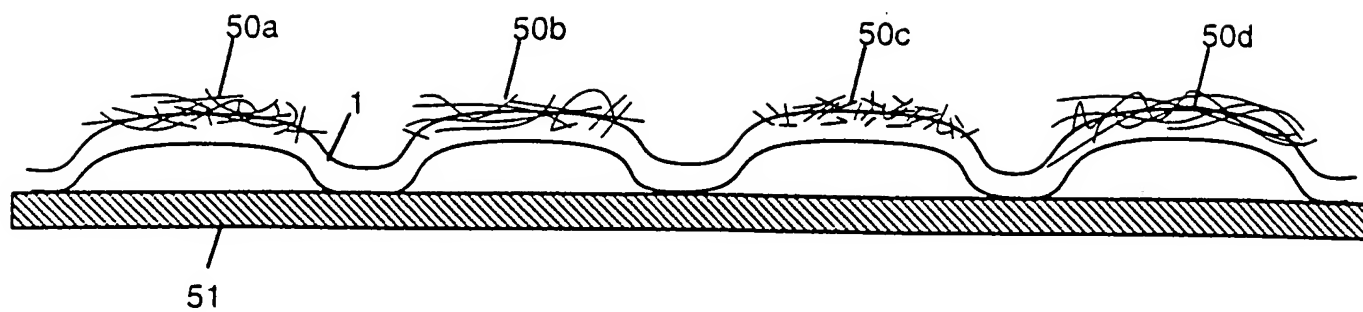


FIG. 13

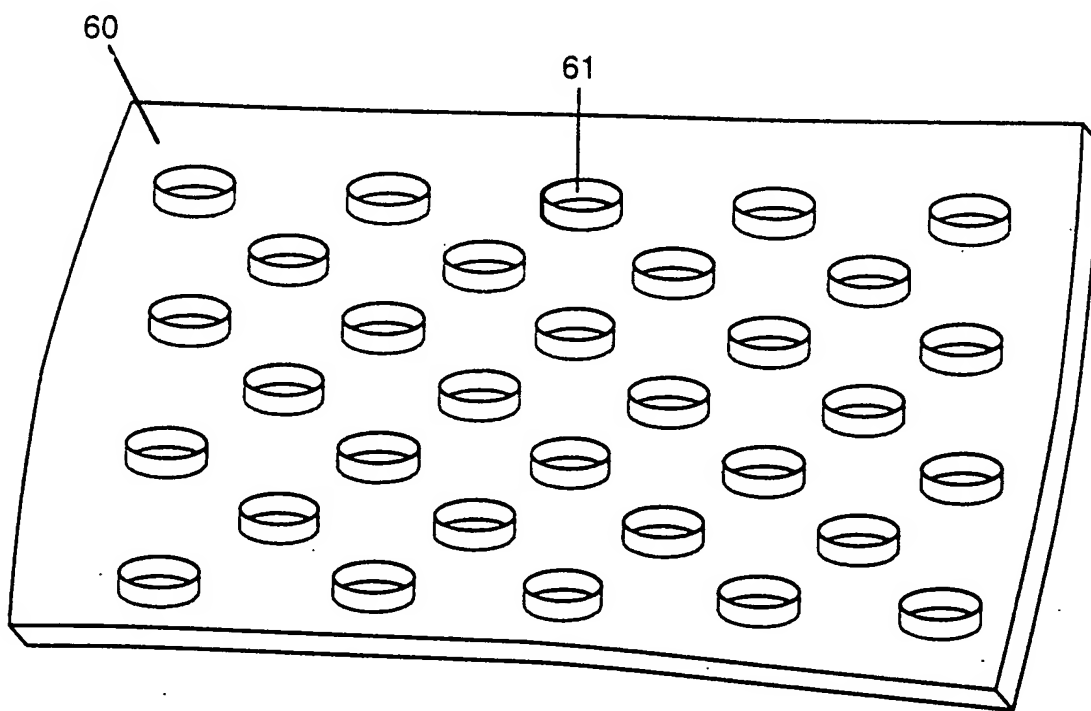


FIG. 14

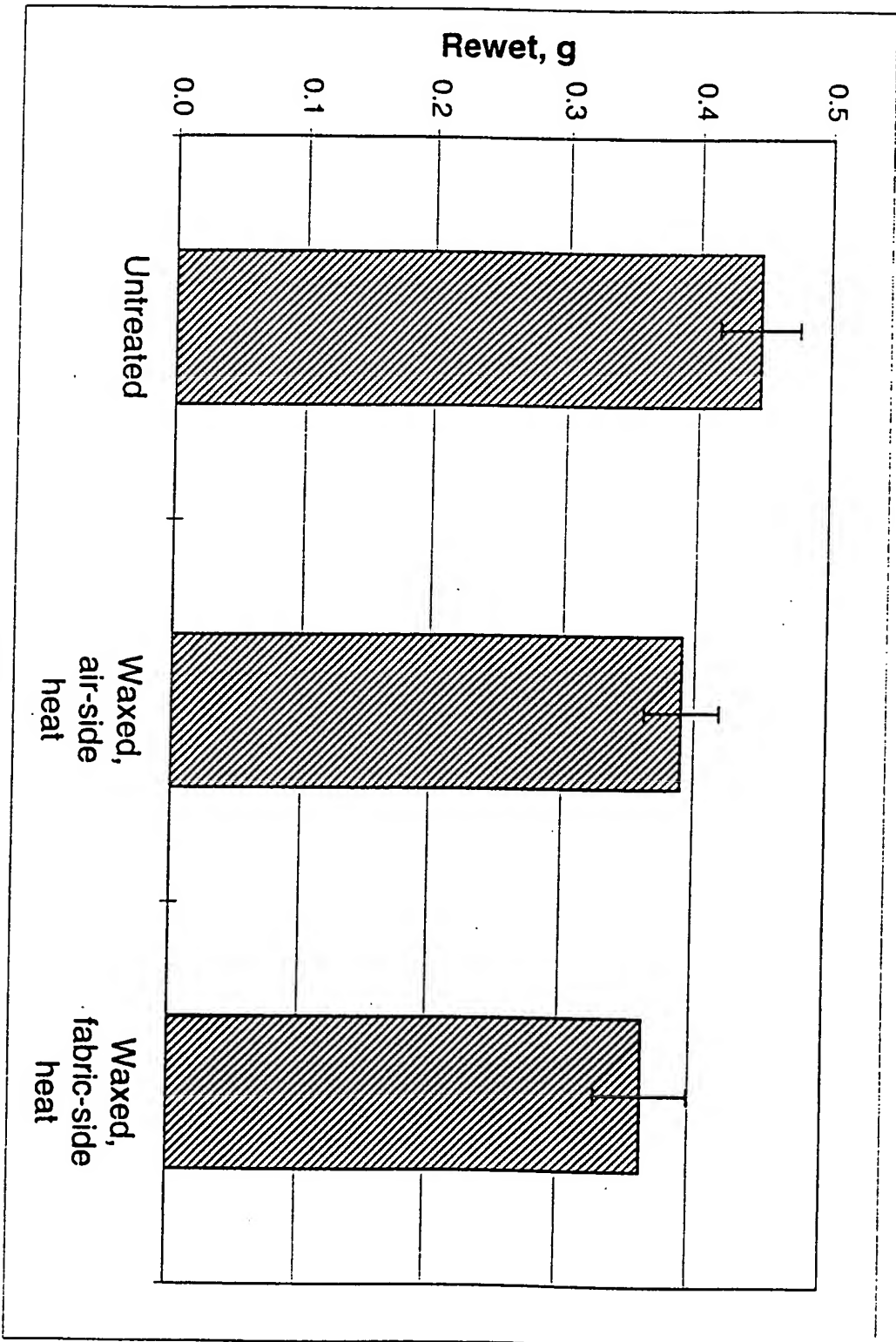


FIG. 15

| Properties of Examples 3-6 | Example 3 | Example 4 | Example 5 | Example 6 |
|--------------------------------------|-----------|-----------|--------------|--------------|
| Furnish | NSWK | NSWK | Spruce BCTMP | Spruce BCTMP |
| Kymene | 0 | 20#/ton | 0 | 20#/ton |
| Basis weight, gsm | 31.7 | 32.2 | 32.4 | 32.7 |
| MD grams dry | 1592 | 2761 | 1678 | 2257 |
| MD % stretch dry | 7.6 | 10.0 | 1.8 | 1.8 |
| CD grams dry | 1671 | 2459 | 1540 | 1872 |
| CD % stretch dry | 5.0 | 5.7 | 3.5 | 3.2 |
| GMT grams dry | 1631 | 2606 | 1608 | 2056 |
| MD grams wet | 106 | 892 | 49 | 826 |
| MD % stretch wet | 13.4 | 8.8 | 6.8 | 3.2 |
| CD grams wet | 71 | 715 | 47 | 759 |
| CD % stretch wet | 9.0 | 5.3 | 5.5 | 3.2 |
| GMT grams wet | 87 | 798 | 48 | 792 |
| MD % wet/dry | 6.6 | 32.3 | 2.9 | 36.6 |
| CD % wet/dry | 4.2 | 29.1 | 3.1 | 40.5 |
| GMT % wet/dry | 5.3 | 30.6 | 3.0 | 38.5 |
| 1-Sheet TMI mm | .602 | .605 | .630 | .602 |
| 10-Sheet TMI mm | 3.34 | 3.68 | 3.91 | 3.95 |
| Density, g/cc | .053 | .053 | .051 | .054 |
| Bulk cc/g | 19.0 | 18.8 | 19.4 | 18.4 |
| Horizontal Absorb. at 0.075 psi, g/g | 7.6 | 8.7 | 10.2 | 10.1 |
| Tilted Absorbency at 0.075 psi, g/g | 7.1 | 7.6 | 9.7 | 9.3 |
| Percent Wet Wrinkle Recovery | 34.4 | 52.7 | 35.0 | 81.6 |
| Springback | .46 | .73 | .66 | .85 |
| WCB, cc/g | 5.2 | 6 | 7.1 | 7.9 |
| LER | .49 | .65 | .65 | .83 |

FIG. 16

| | Example 7 | Example 8 | Example 9 | Example 10 |
|---|-----------|-----------|-----------|------------|
| Basis weight, gsm | 13.6 | 17.6 | 23.9 | 30.1 |
| MD grams dry | 1167 | 649 | 1091 | 1605 |
| MD % stretch dry | 1.4 | 3.7 | 4.0 | 5.1 |
| CD grams dry | 630 | 727 | 1130 | 1624 |
| CD % stretch dry | 2.6 | 3.5 | 4.0 | 4.0 |
| GMT grams dry | 857 | 687 | 1110 | 1614 |
| MD grams wet | 393 | 294 | 465 | 671 |
| MD % stretch wet | 1.5 | 5.0 | 5.5 | 5.5 |
| CD grams wet | 223 | 251 | 429 | 586 |
| CD % stretch wet | 2.4 | 3.3 | 3.5 | 3.5 |
| GMT grams wet | 296 | 272 | 447 | 627 |
| MD % wet/dry | 33.7 | 45.3 | 42.6 | 41.8 |
| CD % wet/dry | 35.4 | 34.5 | 38.0 | 36.1 |
| GMT % wet/dry | 34.5 | 40.0 | 40.3 | 38.8 |
| 1-Sheet TMI mm | .335 | .533 | .610 | .655 |
| 10-Sheet TMI mm | 1.94 | 2.91 | 4.00 | 4.55 |
| Bulk cc/g | 24.6 | 30.3 | 25.5 | 21.8 |
| Horizontal Absorb. at 0.075 psi, g/g | 12.2 | 13.3 | 13.0 | 11.8 |
| Tilted Absorbency at 0.075 psi, g/g | 11.4 | 11.8 | 11.3 | 10.2 |
| Density, g/cc | .041 | .033 | .039 | .046 |
| Percent Wet Wrinkle Recovery | 73.8 | 76.7 | 85.0 | 86.7 |
| Springback | NA | .791 | .841 | .838 |
| WCB, cc/g | NA | 8.2 | 8.1 | 8.0 |
| LER | NA | .802 | .783 | .808 |

FIG. 17